

KOZ'MIN, Yu.A.; SHUL'GIN, L.P.; PONOMAREV, V.D.

Solubility product of bivalent europium sulfate. Zhur. neorg.
khim. 9 no.11:2532-2535 N '64 (MIRA 18:1)

1. Laboratoriya redkikh i redkozemel'nykh metalloV Vsesoyuznogo
gornometallurgicheskogo nauchno-issledovatel'skogo instituta
tsvetnykh metalloV.

SULEYMENOV, E.N.; MACHKASOV, Ye.I.; PONOMAREV, V.D.

Chlorination in a fluidized bed of high-titanium slags with
a varying content of calcium oxide. Trudy Inst. met i obog.
AN Kazakh. SSR 9:32-38 '64. (MIRA 17:9)

OTTO, D.D.; AKHMETOV, S.F.; PONOMAREV, V.D.

Studying the phase constitution of precipitates obtained during
the desiliconizing of high modulus aluminate solutions. Trudy Inst.
met. i obog. AN Kazakh. SSR 9:63-68 '64. (MIRA 17:9)

NI, L.P.; MEDVEDKOV, B.Ye.; PONOMAREV, V.D.

Interaction in the system $\text{Na}_2\text{O} - \text{CaO} - \text{SiO}_2 - \text{H}_2\text{O}$ at 280°C .
Trudy Inst. met. i obog. AN Kazakh. SSR 9:69-76 '64.
(11.14 17:9)

PONOMAREV, V.D.; OITO, D.D.

Desiliconizing high modulus aluminate solutions. Trudy Inst.
met. i obog. AN Kazakh. SSR 9:97-102 '64. (MIRA 17:9)

____PONOMAREV, V.D., akademik; MAL'TSEV, V.S., kand.tekhn.nauk; AKHMETOV,
S.F.; RAKHIMOV, A.R.

Solid products resulting from hydrochemical processing of blast-
furnace slags. Vest. AN Kazakh. SSR 20 no.4:47-53 Ap '64.

(MIRA 17:9)

NI, L.P.; ROMANOV, L.G.; PROKHOROV, S.T.; PONOMAREV, V.D.

Alkaline hydroaluminosilicates formed by desilication of aluminate solutions. Zhur. prikl. khim. 37 no.8:1671-1676 Ag '64.
(MIR 17-11)

MACHKASOV, Ye.I.; SUBBYANOV, M.R.; POTEMANOV, V.S.

Investigating the chlorination process of granulated high-titanium
slag in a fluidized bed. Trudy Inst. met. i obog. AN Kazakh.SSR
8:32-39 '63 (MIRA 17:8)

GOL'DMAN, M.M.; PONOMAREV, V.D.; GALUZ, V.M.; POLYAKOVA, T.P.; KAIRBAYEVA,
Z.K.

Role of potassium in the leaching of nepheline rocks. Trudy
Inst. met. i obog. AN Kazakh. SSR 8:72-76 '63 (MIRA 17:8)

BAITENOV, N.A.; ~~POKHODNOV, V.D.~~

Decomposition potential of the system $H_2O_2 - NaCl - H_2O$.
Report No.1 Tudy Inst. met. i obog. AN Kazakh. SSR 8:
97-101 *63 (MIRA 17:8)

ACCESSION NR: AT4016809

8/2817/63/008/000/0113/0121

AUTHOR: Porubayev, V. P.; Ponomarev, V. D.

TITLE: Cathode polarization of lithium on a gallium cathode, part I

SOURCE: AN KazSSR. Institut metallurgii i obogashcheniya. Trudy, v. 8, 1963. Tsvetnaya metallurgiya (Nonferrous metallurgy), 113-121

TOPIC TAGS: cathode polarization, polarization lithium, gallium

ABSTRACT: There are no known publications on the cathode polarization of alkali metals on a gallium cathode, and there are only a few articles on the electrochemical investigation of gallium. N. I. Veryomin electrolyzed gallium solutions with mercury and gallium cathodes. S. I. Sklyarenko and B. A. Sakharov studied the deposition of lithium at a mercury cathode; L. N. Sheludyakov, L. A. Saltovskaya, and V. V. Stender worked in a wider range of amalgam concentrations. The present authors studied lithium deposition at a gallium cathode and the possibility of lithium reduction from aqueous solutions at 30C. Fig. 1 of the Enclosure shows a diagram of the testing unit. The dependence of the potential at the gallium cathode on the current density (for 10 to 2,000 A/M²) and the

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ACCESSION NR: AT4016809

electrolyte content was investigated at 30C. For all the investigated solutions, the excess voltage for hydrogen electrolysis rose together with a decrease in electrolyte acidity. An increase in the lithium concentration in the electrolyte led to a shifting of the lithium reduction potential toward the negative field. Lithium was reduced better at the gallium cathode in neutral nitrate solutions. The cathode potential in sulfate and nitrate solutions was not directly proportional to the logarithm of the current density. This showed that the lithium concentration was higher on the gallium surface layer. Finally, it was shown that lithium has a low diffusion capacity in gallium. Orig. art. has: 9 figures and 6 tables.

ASSOCIATION: Institut metallurgii i obogashcheniya, AN KazSSR (Metallurgical and Metal Concentration Institute AN KazSSR)

SUBMITTED: 00

DATE ACQ: 13Feb64

ENCL: 01

SUB CODE: EC

NO REF SOV: 006

OTHER: 003

Card

2/3

GOL'DMAN, M.M.; SHUSTER, R.L.; MACHKASOV,, Ye.I.; SAZHIN, Yu .G.;
SULEYME'NOV, E.N.; SPIVAK, Yu.M.; NI, L.P.; PONOMAREV. V.D.

Utilizing nepheline pulp, lean in calcium oxide for needs of
the construction industry. Trudy Inst. met. i obog. AN Kazakh.
SSR 8:122-125 *63 ; (MIRA 17:8)

PONOMAREV, V.G.; SPIVAK, Ye.M.; BALASHOV, Ye.I.

Filter-separation of autoclave pulp. Trudy Inst. met. i obog.
AN Kazakh. SSR 84026-138 '63 (MIRA 17:8)

PONOMAREV, V.D.

Detection of steroids and triterpenoids by means of aldehydes.
Zhur. anal. khim. 18 no.1:137-140 Ja '63. (MIRA 16:4)

1. Pyatigorsk Pharmaceutical Institute.
(Steroids) (Terpenoids) (Aldehydes)

MIKHIREV, P.A., inzh.; PONOMAREV, V.D., inzh.

Potentials for increasing the productivity of PPM-4 rock loaders.
Gor. zhur. no.7:63-64 J1 '62. (MIRA 15:7)

1. Institut gornogo dela Sibirskogo otdeleniya AN SSSR, Novosibirsk
(for Mikhirev).
2. Noril'skiy kombinat (for Ponomarev).
(Mining machinery)

PONOMAREV, V.D., akademik; SHCHERBAN, S.A.

Some solid products of hydrochemical processing of aluminosilicates. Vest. AN Kazakh. SSR 18 no.10:28-34 O '62.
(MIRA 17:9)

1. Akademiya nauk Kazakhskoy SSR (for Ponomarev).

NI, L.P.; ROMANOV, L.G.; OSIPOVA, Ye.F.; PONOMAREV, V.D.

Interaction of sodium hydroalumosilicates with alkali solutions.
Trudy Inst. met. i obog. AN Kazakh. SSR 9:90-96 '64.
(MIRA 17:9)

GOL'DMAN, M.M.; SHUSTER, R.L.; MACHKASOV, Ye.I.; NI, L.P.; PONOMAREV, V.D.

Obtaining mineral wool from slimes of nephelyne rock processing.

Trudy Inst. met. i obog. AN Kazakh. SSR 9:112-115 '64.

(MIRA 17:9)

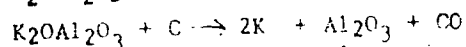
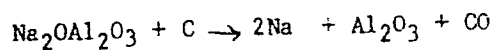
KIR'YAKOV, Gleb Zakharovich; PONOMAREV, V.D., akademik, retsenzent;
SONGIIA, O.A., doktor khim. nauk, retsenzent; KABANOV,
B.N., doktor khim. nauk, retsenzent; KUSHNIKOV, Yu.A.,
kand. khim. nauk, retsenzent; ILYUSHCHENKO, V.M., kand.
khim. nauk, retsenzent; KOZIN, L.F., kand. khim. nauk,
otv. red.; IVANOVA, E.I., red.

[Electrode processes in sulfuric acid solutions of zinc]
Elektrodnye protsessy v sernokislykh rastvorakh tsinka.
Alma-Ata, Nauka, 1964. 186 p. (MIRA 17:12)

1. Akademiya nauk Kaz.SSR (for Ponomarev).

duction, carbon reduction

ABSTRACT: The object of the work was to study the reduction of sodium and potassium aluminate by carbon in a vacuum and to obtain some data on the mechanism of the process. The overall reactions are



The effect of temperature on the yield of the metal was investigated: the maximum yield of sodium (82%) was reached at 1200C, and the maximum yield of potassium (92-93%), at 1100C. Data from crystal optical analysis and x-ray diffraction studies led to the following conclusion: in addition to β -alumina, the products

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ACCESSION NR: AF5003365

of thermal reduction of sodium and potassium aluminate contain active low-temperature forms of alumina, θ - Al_2O_3 and ζ - Al_2O_3 , both as separate phases and mixed with sodium (potassium) aluminate and γ -alumina. When the aluminates are heated to 1200-1400C, a new phase, α - Al_2O_3 , is formed whose amount increases with rising temperature and increasing duration of the experiment. Orig. art. has: 1 figure, 1 table and 2 formulas.

"APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001342120013-4

Card 2/2

APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001342120013-4"

NI, L.P.; ZAKHAROVA, M.V.; PONOMAREV, V.D.

Behavior of alumina in potassium aluminate solutions at 90° C.
Trudy Inst. met. i obog. AN Kazakh. SSR 9:76-84 '64.
(MIRA 17:9)

NIKIFOROVA, G.A.; FAVORSKAYA, L.V.; PONOMAREV, V.D.

Coprecipitation of scandium and aluminum under the effect on their
solutions of sodium silicofluoride. Trudy Inst. met. i ob. s. AN
Kazakh. SSR 9:85-89 '64. (MIRA 17:9)

NI, L.P.; PEREKHREST, G.L.; PONOMAREV, V.D.

Effect of potassium hydroside on the composition of solid phases
formed during silicon removal from aluminate solutions at 90°C.
Zhur. prikl. khim. 37 no.9:1902-1908 S '64.

(MIRA 17:10)

PUS'KO, A.G.; PONOMAREV, V.D.

Effect of the partial pressure of water vapors on the process
of sulfation of titanium materials. Zhur. prikl. khim. 38
no.3:668-671. 1965. (MIRA 18:11)

1. Submitted Sept. 30, 1963.

PONOMAREV, V.F.

Automatic lines for machining rods of telescopic shock absorbers.

Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch.i tekhn.inform.

no.9:39-41 '63.

(MIRA 16:10)

GOL'DIN, M.M.; ZUYEV, V.D.; PINUS, L.A.; PONOMAREV, V.F.;
CHERNYSHEV, V.Ye.; LIKHIN, N.I., inzh., retsenzent;
YARKOV, A.M., inzh., red.

[Adjustment and operation of automatic lines composed of
standard units; a handbook] Naladka i ekspluatatsiia av-
tomaticheskikh linii iz normalizovannykh uzlov; spravochnoe
posobie. Moskva, Mashinostroenie, 1965. 443 p.

(MIRA 18:10)

CHUMACHENKO, I.N.; RAKHMATEZHANOV, U.; SUSHENITSA, B.A.; KUZNETSOVA,
N.Ye.; PONOMAREV, V.G.; FOKEYEV, N.I.; ERGASHEV, R.;
PROTIKOVSKAYA, S., red.

[Recent developments in the use of mineral fertilizers)
Novoe v primeneni mineral'nykh udobrenii. Dushanbe, Izd-
vo "Irfon," 1964. 61 p. (MIRA 18:4)

PONOMAREV, V.G.

Basic stages in the hypogene mineral formation in the Rudnyy Log
hematite deposit. Trudy SNIGGIMS no.6:68-71 '61. (MIRA 15:7)
(Altai Mountains--Ore deposits)

PONOMAREV, V. G.

Champagne (Wine)

Reasons for cloudiness in reservoir ^lcampagne. Vin. SSSR 12 No. 9, 1952.

9. Monthly List of Russian Accessions, Library of Congress, December 195₂. Unclassified.

PONOMAREV, V. G.

29715

Dolivochnyy apparat. Vinodyeliye i vinogradarstvo SSSR, 1949, No. 9, S. 31-33

So: Letopis' No. 40

VIGDORCHIK, D. Ya.; IVANOV, V.P.; PINCHAREV, V.G.

RIV single-valve pressure regulators. Gaz. prom. 8 no. 3:29-30
'63 (MIRA 17:7)

PONOMAREV, V.G.

Volcanic sedimentary iron ores in the ore zone of the Zyryanovsk
complex metal deposit of the Rudnyy Altai. Trudy SNIIGGIMS no.35:
72-81 '64. (MIRA 18:5)

PONOMAREV, V.G.

Authigenous tourmaline in Middle Devonian iron effusive-sedimentary
ores in the southern part of the eastern Altai. Trudy SNIIGGIMS
no.35:158-162 '64. (MIRA 18:5)

" PONOMAREV, V.G.

Ore formation in Devonian volcanogenic deposits of the western
part of the Altai. Izv. Alt. otd. Geog. ob-va SSSR no.5:46-48 '65.
(MIRA 18:12)

1. Sibirskiy nauchno-issledovatel'skiy institut geologii,
geofiziki i mineral'nogo syr'ya, Novosibirsk.

POHOMAREV, V.I.

Continuous decomposition of bicomponents. Usp.mat.nauk 12 no.4:335-340
Jl-Ag '57. (MIRA 10:10)

(Topology)

20-118-6-8/43

AUTHOR: Ponomarev, V. I.

TITLE:

A new Space of Closed Sets and Many-valued Mappings of the Bicompecta (Novoye prostranstvo zamknutykh mnozhestv i mnogoznachnyye otobrazheniya bikompaktov)

PERIODICAL: Doklady Akademii Nauk, 1958, Vol 118, Nr 6, pp 1081-1084 (USSR)

ABSTRACT: Let X be an arbitrary T_1 -space. All non-empty closed sets of X are denoted as points of the space $\mathcal{C}X$. Let $F_0 \in \mathcal{C}X$; $O(F_0)$ is defined as the totality of all closed sets of X lying in OF_0 , where OF_0 is the neighborhood of the set F_0 in the space X . Numerous properties of the $\mathcal{C}X$ -space are enumerated: $\mathcal{C}X$ never is a Hausdorff-space; $\mathcal{C}X$ and $\mathcal{C}Y$ are homeomorphic then and only then if the spaces X and Y are homeomorphic; for an arbitrary T_1 -space X the space $\mathcal{C}X$ is connected and bicompect; if X is bicompect, then $\mathcal{C}X$ has the "property of the fixed point". The $\mathcal{C}X$ -space defined in this way, is used by the author for the investigation of ambiguous continuous mappings of the bicompecta. Let f be a mapping of X onto Y and f' be the inverse mapping: $(f')' = f$.

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Theorem: The mapping f of the bicompectum X onto the bicompectum Y

PONOMAREV, V. I.

Multivalued mappings of topological spaces. Dokl. AN SSSR 124
no. 2:268-271 Ja '59. (MIRA 12:1)

1. Kafedra vysshey geometrii i topologii Moskovskogo gosudar-
stvennogo universiteta imeni M.V. Lomonosova. Predstavleno
akademikom Aleksandrovym.
(Topology)

16(1)

SOV/42-14-4-18/27

AUTHOR:

Ponomarev, V.I.

TITLE:

On Closed Mappings

PERIODICAL:

Uspekhi matematicheskikh nauk, 1959, Vol 14, Nr 4, pp 203-206 (USSR)

ABSTRACT:

Let ωX denote the Volman's extension of the T_1 -space X .

Theorem: Every closed mapping of the T_1 -space onto the T_1 -space Y

can continuously be continued in the mapping \bar{f} of ωX in ωY .

The mapping \bar{f} is also closed; see Ponomarev, V.I. in Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 2.

Theorem: Let f be a bicomact mapping (i.e. closed mapping of X into Y for which all $f^{-1}y$ are bicomact) of the T_1 -space X onto the T_1 -space Y , where Y is a G_δ -set in ωY . Then X is a G_δ -set in ωX .

Theorem: Let f be a bicomact mapping of the normal space X onto the space Y complete in the sense of Czech; then X is also complete in the sense of Czech.

Theorem: Let f be a bicomact mapping of the normal space X onto the normal space Y . If Y is bicomact (locally bicomact), then X is bicomact (locally bicomact) too.

Card 1/2

On Closed Mappings

SOV/42-14-4-18/27

The last theorem gives a generalization of the theorem of Eilenberg-Whyburn and, in a somewhat other form, the author has proved it already in [Ref 3].

The author mentions I.A.Vaynshteyn, A.Arkhangel'skiy, and P.S.Aleksandrov.

There are 5 references, 3 of which are Soviet, 1 American, and 1 German.

SUBMITTED: December 4, 1957

Card 2/2

AUTHOR: Aleksandrov, P. (Academician) and
Ponomarev, V.I. SOV/20-121-4. 1/54

TITLE: On Bicomact Extensions of Topological Spaces (O bikompaktnykh rasshireniyakh topologicheskikh prostranstv)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 121, Nr 4, pp 575-578 (USSR)

ABSTRACT: The authors consider the axiomatization in the paper of Freudenthal [Ref 3] to be unsuitable and they propose the following system of axioms for the relation $F < H$, where F is a closed and H an open set of the topological space X :

- K 1 : from $F < H$ it follows $X \setminus H < X \setminus F$
- K 2 : " $F < H$ it follows $F \subseteq H$
- K 3 : from $F \subseteq F_1 < H_1 \subseteq H$ it follows $F < H$
- K 4 : from $F_1 < H_1, F_2 < H_2$ it follows $F_1 \cup F_2 < H_1 \cup H_2$
- K 5 : if $F < H$, then there exists an H_1 , so that $F < H_1$, $[H_1] < H$
- K 6 : $\bigwedge < \bigwedge$, \bigwedge - empty set
- K 7 : for every neighborhood $O_x, x \in X$ there exists an $O_1 x$, so that $[O_1 x] < O_x$.

Card 1/ 2

On Bicompact Extensions of Topological Spaces

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On the base of this system of axioms the authors obtain the theorem of Smirnov [Ref 5] on bicompact extensions and a certain generalization of the last result of Sklyarenko [Ref 7] concerning the necessary and sufficient conditions that X admits a bicompact extension with a zero-dimensional complement.

The paper starts from a former investigation of P. Aleksandrov [Ref 1] .

There are 7 references, 5 of which are Soviet, 1 American, and 1 Dutch.

ASSOCIATION: Kafedra vysshey geometrii i topologii Moskovskogo gosudarstvennogo universiteta imeni M.V. Lomonosova (Chair of Higher Geometry and Topology of the Moscow State University imeni M.V. Lomonosov)

SUBMITTED: May 6, 1958

Card 2/2

16(1)

AUTHOR:

Ponomarev, V.I.

SOV/20-124-2-6/72

TITLE:

Multivalent Mappings of Topological Spaces (O mnogoznachnykh otobrazheniyakh topologicheskikh prostranstv)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 2, pp 268-271 (USSR)

ABSTRACT:

The paper, written under the leading of P.S.Aleksandrov, continues the investigations of the author [Ref 1]. The paper consists of four sections. In the first one the notions and results of [Ref 1] are summarized. The second section is devoted to the continuation of the mappings on bicomact extensions; the author considers bicomact Hausdorff extensions and here a result of Yu.M.Smirnov [Ref 3] is generalized. The third section treats ambiguous mappings of spaces satisfying certain conditions of compactness.

Theorem: Let f be a complete mapping of the space X onto the space Y . If one of the spaces X or Y is locally bicomact, then so does the other.

Theorem: Let f be a closed continuous Y -compact mapping of the normal space X onto the normal space Y . If X is countably paracompact, then so does Y .

In the fourth section the author formulates the theorem on the invariance of the local connection for unique closed continuous

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Multivalent Mappings of Topological Spaces

SOV/20-124-2-6/71

mappings in a correspondingly generalized form for ambiguous mappings. Ten theorems and several conclusions are given altogether.

There are 4 references, 3 of which are Soviet, and 1 Japanese.

ASSOCIATION: Kafedra vysshey geometrii i topologii Moskovskogo gosudarstvennogo universiteta imeni M.V.Lomonosova (Chair of Higher Geometry and Topology at the Moscow State University imeni M.V.Lomonosov)

PRESENTED: October 31, 1958, by P.S.Aleksandrov, Academician

SUBMITTED: October 31, 1958

Card 2/2

ALEKSANDROV, P.S.; PONOMAREV, V.I.

Bicompact expansions of topological spaces. Vest.Mosk.un.Ser.mat.,
mekh., astron., fiz., khim. 14 no.5:93-108 '59. (MIRA 13:8)
(Aggregates)

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S/055/59/000/05/010/020

AUTHORS: Aleksandrov, P. S., Ponomarev, V. ~~X~~ I.

TITLE: On Bicomact Extensions of Topological Spaces ¹⁶

PERIODICAL: Vestnik Moskovskogo universiteta. Seriya matematiki, mekhaniki, astronomii, fiziki, khimii, 1959, No. 5, pp. 93-108

TEXT: With the aid of seven axioms the authors define the notion of subordination of sets in a topological space X . The notion is a generalization of the neighborhood notion, since spaces with subordination relation for arbitrary sets are identical with the neighborhood spaces. The authors prove that the spaces of all v -ends of a space X with the subordination v is a bicomact extension of the space X ; conversely, to every bicomact extension of the topological space X there corresponds a certain subordination v . Then the theorem of Ye. Sklyarenko (Ref. 4) is generalized with the aid of the subordination notion. The continuation of the subordination is investigated in two cases.

The authors mention Yu. M. Smirnov and V. A. Yefremovich. There are 4 Soviet references.

SUBMITTED: April 30, 1958
Card 1/1

X

5

16(1)

AUTHOR: Ponomarev, V.I.

SOV/39-48-2-4/9

TITLE: A New Space of Closed Sets and Ambiguous Continuous Mappings of Bicompacta

PERIODICAL: Matematicheskii sbornik, 1959, Vol 48, Nr 2, pp 191-212 (USSR)

ABSTRACT: For every T_1 -space X a space $\mathfrak{K}X$ is defined as follows: Points of $\mathfrak{K}X$ are non-empty closed sets of X ; the neighborhood $O(F_0)$ of the point $(F_0) \in \mathfrak{K}X$ is the set of all closed sets $F \subseteq X$ lying in an arbitrary neighborhood OF_0 of the set F_0 in the space X . In §1 the author considers properties of $\mathfrak{K}X$. The space $\mathfrak{K}X$ is a bicomact T_0 -space, it never is Hausdorffian (with the exception of the trivial case, where X consists of one point). For every unique continuous mapping into itself $\mathfrak{K}X$ has a fixed point. Let $D^{\mathbb{Z}}$ be the topological product of \mathbb{Z} copies of a space consisting of two isolated points; then $\mathfrak{K}D^{\mathbb{Z}}$ is a universal space for all T_0 -spaces with the weight $\leq \mathbb{Z}$. In §2 the space $\mathfrak{K}X$ is used for the investigation of ambiguous continuous mappings. The author only considers mappings which let correspond to every point $x \in X$

Card 1/2

A New Space of Closed Sets and Ambiguous Continuous Mappings of Bicompecta SOV/39-48-2-4/9

a closed set $fx \subseteq Y$, where the continuity is defined strongly according to Cauchy. It is shown that a continuous mapping of a bicompectum into a bicompectum always is closed and that the closedness of one of the mappings f or f' (f' is the reversion of f) is necessary and sufficient for the closedness of the other one. In §3 it is shown that the continuity of the mapping can be defined by the notion of the convergence of sequences on every directed set. Finally it is stated that the used Cauchy notion of the continuity of an ambiguous mapping is suitable in the case of bicompect spaces X and Y . The author mentions the support of P.S.Aleksandrov. 29 theorems and lemmas and numerous definitions are given.

There are 7 references, 5 of which are Soviet, and 2 American.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova
(Moscow State University imeni M.V.Lomonosov)
Kafedra vysshey geometrii i topologii (Chair of Higher Geometry and Topology)

SUBMITTED: October 9, 1957
Card 2/2

16(1)

AUTHOR: Ponomarev, V.I.

SOV/20-126-4-7/62

TITLE: Open Mappings of Normal Spaces

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 4, pp 716-718 (USSR)

ABSTRACT: The author completes and improves the results of his preceding publication [Ref 1]. He uses the terminology of [Ref 1].
 Theorem: Let f be a continuous unique, simultaneously open and closed mapping of the normal space X onto the normal space Y with bicomact inverse images $f^{-1}y$ of all points $y \in Y$. Then the single continuous mapping βf of the Czech extension of βX onto βY which is a continuation of the mapping f , is open.
 Theorem: Let f satisfy the assumptions of the preceding theorem; let the normal space X be functionally closed (i.e. a Q -space). Then Y is functionally closed too.
 Two further theorems improve the results of [Ref 1]. The author asks two questions: 1) Is it possible to desist from the bicomactness of f in the first theorem? 2) Does the functional closedness of the space remain true for complete

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Open Mappings of Normal Spaces

SOV/20-126-4-7/62

(but not open) mappings?

There are 5 references, 4 of which are Soviet, and 1 Polish.

PRESENTED: March 26, 1959, by P.S.Aleksandrov, Academician

SUBMITTED: March 22, 1959

Card 2/2

89985

S/039/60/051/004/007/007XX

C 111/ C 333

/6.5460

AUTHOR: Ponomarev, V. I. (Moscow)

TITLE: On the properties of topological spaces which are maintained under multivalent continuous mappings

PERIODICAL: Matematicheskiy sbornik, v. 51, no. 4, 1960, 515-536

TEXT: The author uses notations and notions from his paper (Ref.1: Novoye prostranstvo zamknytykh mnozhestv i mnogoznachnyy nepreryvnyye otobrazheniya bikompaktov [A new space of closed sets and multiple continuous mappings of bicomacts], Matem. sb., 48 (90)(1959), 191-212).

The author considers the mappings f of the topological space X onto the topological space Y for which there corresponds a closed set $fx \subseteq Y$ to every point $x \in X$. Let A be a set in X , B a set in Y .

§ 1. The inverse mapping f' is defined by $f'y = \bigcup_{x \in X} (x, fx \ni y)$; $(f')' = f$. The set $f'A = \bigcup_{x \in A} fx$ is called (large) image of A

under the mapping f . The set $f'B = \bigcup_{x \in X} (x, fx \cap B \neq \emptyset)$ is called large original of B under the mapping f . To every B (or A), $f^b B =$

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$= \bigcup (x, f x \subseteq B)$ (or $f^* A = \bigcup (y, f' y \subseteq A)$) is the small original of B (or A) under the mapping f. The mapping f is continuous, if the large original of any B is closed in X. f is called closed (open), if the large image of every closed (open) set A is closed (open) in Y. The continuity of f holds if and only if $f' A$ is closed. The mapping f is called skew-continuous, if the large original $f' B$ of any open set B is open. Mappings which are simultaneously continuous and skew-continuous are called strongly continuous.

Theorem 1: In order that f be skew-continuous (i.e. that f' is open), it is

$$f[A] \subseteq [fA] \quad (1)$$

for every $A \subseteq X$.

Theorem 2: In order that f be open (i.e. that f' be skew-continuous), it is necessary and sufficient that it holds

$$[f^* A] \subseteq f^* [A] \quad (2)$$

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for every $A \subseteq X$

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On the properties of topological . . . C 111/ C 333

Theorem 3: In order that f be closed (i.e. f' continuous), it is necessary and sufficient that it holds

$$[fA] \subseteq f[A] \quad (3)$$

for every $A \subseteq X$.

§ 2. The author distinguishes: X -bicomact mappings for which $f'y$ is bicomact for all $y \in Y$, and Y -bicomact mappings for which fx is bicomact for all $x \in X$. Mappings which are simultaneously X - and Y -bicomact and continuous in both directions are called perfect.

Theorem 1 (Yu. M. Smirnov): Let f be a perfect mapping of X onto Y . Then there exists a space Z and unique perfect mappings p_X of Z onto X and p_Y of Z onto Y such that

$$fx = p_Y \circ p_X^{-1}x \quad (1)$$

for all $x \in X$.

Theorem 2 is a strengthening of theorem 1.

Theorem 3: Let f be a perfect mapping of a completely regular space

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On the properties of topological . . . C 111/ C 333

X onto a completely regular space Y. If X is paracompact (star paracompact, denumerable paracompact, locally paracompact), then Y is paracompact too, and conversely.

§ 3. Theorem 1: Let X be π -bicomact and let f be continuous, open, monotone mapping of X onto Y, bicomact in both sides. Then f is closed.

Theorem 2: Let f be a strongly continuous, open, strictly monotone mapping, bicomact in both sides, of the π -bicomact space X onto the space Y. Then X and Y are locally bicomact.

Theorem 3: Let f be a monotone, perfect mapping of the π -bicomact X onto Y. Every uniqueness point $y_0 = fx_0$ of f then is a point of π -bicomactness of Y. ($y_0 \in Y$ is called uniqueness point of f, if y_0 is contained in no set fx of more than one point).

§ 4. Theorem 1: The strongly continuous, Y-bicomact image of a weakly compact space X is a weakly compact space Y.

Theorem 2: Let f be a strongly continuous, Y-bicomact mapping of the weakly compact space X into the paracompact Y. Then the entire Card 4/6

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set fX is contained in a bicomact lying in Y .

Theorem 3: If f is a strongly continuous Y -bicomact mapping of an H -closed Hausdorff space X onto the Hausdorff space Y , then Y is also H -closed. § 5. Theorem 1: If the T_1 -space Y is the image of a locally connected space X under a closed unique mapping f , then Y is locally connected. Especially, a bicomact Y which is the continuous image of a locally connected bicomact X is locally connected.

Theorem 2: Let f be a strongly continuous, almost unique mapping of the locally connected bicomact X onto the Hausdorff space Y . Then Y is also locally connected.

Here a mapping f of X onto Y is called almost unique if the set fX is everywhere dense in the space $\mathfrak{A}Y$ (see (Ref.1)); \bar{f} is the mapping of X onto $\mathfrak{A}Y$ for which $x \in X$ is mapped into $fx \in \mathfrak{A}Y$.

Yu. M. Smirnov and P. S. Aleksandrov are mentioned.

There are 4 Soviet-bloc and 9 non-Soviet-bloc references. The four most recent references to English-language publications read as
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C 111/ C 333

On the properties of topological . . .

follows: Siiro Hanai, On closed mappings. II, Proc. Jap. Acad.,
36 (1954), 285-288; J. L. Kelley, General Topology, New York, 1955;
R. W. Bagley, E. H. Connel, J. D. Mc Knight, On properties
characterizing pseudocompact spaces, Proc. Amer. Math. Soc., 2,
No. 3 (1958), 500-506; M. Henriksen, J. R. Isbell, Some proper-
ties of compactifications, Duke Math. Journ., 25, No 1(1958),
83-106

SUBMITTED: December 25, 1958

Card 6/6

PONOMAREV, V.I. (Moskva)

Properties of topologic spaces conserved in multivalued continuous mappings. Mat. sbor. 51 no. 4:515-536 Ag '60.

(MIRA13:9)

(Topology)

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S/039/60/052/003/005/007
C 111/ C 333

AUTHOR: Ponomarev, V. I. (Moscow)

TITLE: On the Continuation of Multivalent Mappings of Topological Spaces on Their Bicomcompact Extensions

PERIODICAL: Matematicheskiy sbornik, 1960, Vol.52, No.3, pp.847-862

TEXT: The paper is a continuation of (Ref. 1,2) and its results have been already published in (Ref.3).

At first the author considers the continuation of multivalent mappings of the space X on the space Y (both T_1 -spaces) to mappings ωf of the Wallman extension ωX on ωY . He proves that every continuous and closed mapping f of X on Y for which all $f x \subseteq Y$ are bicomcompact is continuable to a continuous closed mapping ωf of ωX on ωY . If f is univalent, then ωf is also univalent. If and only if f is a continuous closed Y - and X -bicomcompact mapping, it admits a bilateral continuation, i. e. a continuation $\varphi : \omega X \rightarrow \omega Y$ such that the inverse mapping $\varphi' : \omega Y \rightarrow \omega X$ is the continuation of f' . If $f: X \rightarrow Y$ is a bilateral (complete) mapping, then from the fact that one of the spaces X, Y is complete in the sense of Czech this property

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Their Bicomact Extensions 16

follows also for the other space. Then the author defines uniform
and strongly uniform mappings for the proximity spaces and generalizes
a theorem of Yu. M. Smirnov (Ref.9).

There are 10 Soviet references.

[Abstracter's note: (Ref.1) is a paper of the author in Matematicheskiy
sbornik, 1959, Vol.48, pp. 191-212; (Ref.2) is a paper of the author
in Matematicheskiy sbornik, 1960, Vol. 51, pp. 515-534; (Ref.3) is a
paper of the author in Doklady Akademii nauk SSSR, 1959, Vol. 124,
No. 2, pp. 268-282 □ .

SUBMITTED: March 19, 1959

Card 2/2

POHOMAREV, V. I.

Normal spaces as images of zero-dimensional ones. Dokl. AN SSSR
132 no.6:1269-1272 Je '60. (MIRA 13:6)
(Topology)

ALEKSANDROV, P.; PONOMAREV, V. I.

Some classes of n -dimensional spaces. Sib. ~~mat.~~ zhur. l no. 1:
3-13 My-Je '60. (MIRA 13:11)
(Spaces, Generalized)

PONOMAREV, V. I.

Paracompact and finally-compact spaces. Dokl. AN SSSR 141 no.3:
561-563 N '61. (MIRA 14:11)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.
Predstavleno akademikom P.S. Aleksandrovym.
(Topology)

PNOMAREV, V. I.

Paracompact spaces and their continuous mappings. Dokl.
AN SSSR 143 no.1:46-49 Mr '62. (MIRA 15:2)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
Predstavleno akademikom P.S.Aleksandrovym.
(Conformal mapping)

PONOMAREV, V. I.

Axioms of countability and continuous mapping. Bul Ac Pol mat 8
no.3:127-134 '60. (EEAI 9:11)

1. Predstavleno P.S. Aleksandrovym.
(Topology)
(Spaces, Generalized)

PONOMAREV, V.I. (Moskva)

Continuation of multivalent mappings of topological spaces on
their bicomact extensions. Mat. sbor. 52 no. 3:847-862 N '60.
(MIRA 13:12)

(Conformal mapping)

✓
PONOMAREV, V. N.

"Projective spectra and topological spaces"

report submitted at the Intl Conf of Mathematics, Stockholm, Sweden,
15-22 Aug 62

ALEKSANDROV, P.S.; PONOMAREV, V.I.

Completely regular spaces and their bicomact extensions.
Vest.Mosk.un.Ser.1:Mat., mekh. 17 no.2:37-43 Mr-Apr '62.
(MIRA 15:6)
1. Kafedra vysshey geometrii i topologii Moskovskogo universiteta.
(Spaces, Generalized) (Topology)

PONOMAREV, V.I.

Properties of a type of compactness. Vest.Mosk.un.Ser.1:Mat.,
mekh. 17 no.2:33-36 Mr-Apr '62. (MIRA 15:6)

1. Kafedra vysshey geometrii i topologii Moskovskogo universiteta.
(Spaces, Generalized) (Topology)

PONOMAREV, V.I.

Spaces satisfying the axioms of denumerability. Vest. Mos. un.
Ser. 1: Mat., mekh. 17 no.4:44-50 J1-Ag '62. (MIRA 15:7)

1. Kafedra vysshey geometrii i topologii Moskovskogo universiteta.
(Topology)

PONOMAREV, V.I. (Moskva)

On the general fixed set for two continuous multiple-valued mappings of a bivcompact in itself. Col math 10: no.2: 227-231 '63.

PONOMAREV, V. I.

Dissertation defended for the degree of Candidate of Physicomathematical Sciences at the Mathematical Institute imeni V. A. Steklova 1962:

"Multi-valued Continuous Reflections of Topological Spaces."

Vest. Akad. Nauk SSSR. No. 4, Moscow, 1963, pages 119-145

ALEKSANDROV, P.S.; PONOMAREV, V.I.

Projective spectra and canonical coverings. Usp. mat. nauk 18
no.5:125-132 S-O '63. (MIRA 16:12)

PONOMAREV, V.I. (Moskva)

Paracompacts, their projective spectra and continuous mappings.
Mat. sbor. 60 no.1:89-119 Ja '63. (MIRA 16:2)
(Topology)

PONOMAREV, V.I.

Metric spaces and continuous mappings connected with them.
Dokl. AN SSSR 153 no.5:1013-1016 D '63. (MIRA 17:1)

1. Moskovskiy gosudarstvennyy universitet im. Lomonosova.
Predstavleno akademikom P.S. Aleksandrovym.

PONOMAREV, V.I.

Walman expansion of a topological space. Sib. mat. zhur. 5
no.6:1333-1342 N-D '64. (MIRA 17:12)

PONOMAREV, V.I.

On (q, p) -mappings of topological spaces. Dokl. AN SSSR 162 no.6:
1252-1255 Je '65. (MIRA 18:7)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
Submitted December 23, 1964.

ACC NR: AP6035917

SOURCE CODE: UR/0413/66/000/020/0163/0163

INVENTOR: Bogdanov, S. A.; Kaloyev, A. V.; Makeyev, A. D.; Shipilevskiy, G. B.;
Ponomarev, V. I.; Simonov, L. P.; Soshnikov, A. A.; Kalinovskiy, N. F.; Vaynshteyn,
L. A.; Pann, L. A.; Kudel'skiy, V. A.; Skrypnik, I. A.

ORG: none

TITLE: Device for automatic control of a wheeled vehicle. Class 45, No. 187433
[announced by the State Union Scientific Research Tractor Institute (Gosudarstvennyy
soyuznyy nauchno-issledovatel'skiy traktorny institut); Khar'kov Tractor Plant
(Khar'kovskiy traktorny zavod)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 20, 1966, 163

TOPIC TAGS: agricultural machinery, ~~automatic control~~, automatic control ^{equipment},
tractor, *motor vehicle*

ABSTRACT: An Author Certificate has been issued for a device for the automatic
control of a wheeled vehicle, which includes a duplicating feeler, a feeler-deflec-
tion transducer, an electric gate valve, and a hydraulic steering-gear amplifier. To
simplify the changeover to and from automatic control, it is equipped with a three-
way cock with a handle. The cock's input is connected to a pump, one of its outputs
is connected to a distributing hydraulic amplifier, and its second output is connected

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UDC: 631.36:629.114.2-52

ACC NR: AP6035917

to the electric gate valve. In order to smoothly change the rpm, between the pump and the cock's input is mounted a throttle. Orig. art. has: 1 figure.

SUB CODE: 13/ SUBM DATE: 30Dec65/

Card- 2/2

STRONGIN, G.M.; KULIKOVA, M.N.; FOMCHAREV, V.I.

Cyclic method of preparation of highly concentrated basecataloren.
Report No.3. Trudy po khim. i khim. tekhn. no.1893-96 '64.

(MIRA 18:12)

1. Submitted May 27, 1963.

GOLOSHCHAPOV, Vyacheslav Alekseyevich; DEDKOV, Yevgeniy Pavlovich;
YAKIMOV, Vladimir Aleksandrovich; PONOMAREV, V.I., otv.
red.; MEDVEDEVA, R., red.izd-va; TELEGINA, T., tekhn.red.

[Budget accounting] Biudzhetyi uchet. Moskva, Gosfiniz-
dat, 1963. 255 p. (MIRA 17:2)

PONOMAREV, V.I., inzh.; MAL'TSEV, B.G., inzh.

Automatic programmed control by reversing the drying agent
in drying chambers. Der. prom. 13 no.5:22-23 My '64.

(MIRA 17:6)

PONOMAREV, V. I.

"Transformation of Electric Circuits and Their Application in the Construction of Filters." Cand Tech Sci, Leningrad Electrical Engineering Inst of Railroad Transport Engineers, Leningrad, 1955. (RZhFiz, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

PCNOMAREV, V.I., inzhener po ratsionalizatsii

~~Stand used for checking electric measuring instruments. Elek.1~~
tepl. tiaga 3 no.5:14-15 My '59. (MIRA 12:9)

1. Depo Petropavlovsk, Omskaya doroga.
(Measuring instruments--Testing)
(Diesel locomotives--Electric equipment--Testing)

PONOMAREV, V.I.

Attenuation in the electric filter of transmission bands.

Elektrosvias' 11 no.10:40-49 0 '57.

(MIRA 10:10)

(Electric filters)

PONOMAREV, V.I.

Effective method of overhauling of the collector of the main
diesel locomotive generator. Elek.i tepl.tiaga 3 no.10:20
0 '59. (MIRA 13:2)

1. Inshener po remontu depo Petropavlovsk, Omskaya deroga.
(Diesel locomotives--Equipment and supplies)

POHOMAREV, V.I., inzh. po ratsionalizatsii

Efficiency expert Isupov suggests... Blok. 1 topl. tiaga 4 no.5:
28-29 My '60. (MIRA 13:7)

1. Depo Petropavlovsk, Omskoy dorogi.
(Diesel locomotives)

PONOMAREV, V.I.

Some improvements in the action of Gel'man's hyetograph, Meteor.
i gidrol. no.5:54-56 My '57. (MIRA 10:8)
(Meteorological instruments)

PONOMAREV, V. I. Cand Tech Sci -- (diss) "Effective methods of assembling large-block residential buildings in the Dnepropetrovsk area." Mos, 1958.

15 pp (Min of Higher Education USSR. Mos Order of Labor Red Banner

Construction Engineering Inst im V. V. Kuybyshev), 150 copies (KL, 52-58, 103)

PONOMAREV, V. I.

USSR/Metals
Cast Iron

Jul 48

"Utilization of Modified Pig Instead of Electrosteel," A. V. Dobrov, A. A. Ryzhikov,
V. A. Tikhomirov, L. S. Anan'in, V. L. Ponomarev, UralskashZavod, 1 p

"Prom Energet" No 7

Suggestion awarded a third prize in 1947 All-Union Contest. Cast iron is modified by
addition of 0.8% ferrosilicon. Table shows chemical analysis and mechanical properties
of product.

PA 6/49T80

PONOMAREV, V.K.

Uniform properties of capron cord fibers. Report No.1.
Khim.volok. no.5:62-64 '62. (MIRA 15:11)

1. Klinskiy kombinat iskusstvennogo i sinteticheskogo
volokna.

(Nylon)

PONOMAREV, V.K.; FILICHEVA, T.B.

Determination of iron content in dyes by means of a photo-
electric colorimeter. Khim.volok. no.3:60-62 '60.
(MIRA 13:7)

1. Klinakiy kombinat.
(Klin--Dyes and dyeing) (Iron--Analysis)

PONOMAREV, V.K.; FILICHEVA, T.B.

Method of determining the concentration of dispersed dye-stuffs in water in the preparation of the suspension for internal dyeing. Khim.volok. no.3:62-64 '60.
(MIRA 13:7)

1. Klin'skiy kombinat.
(Klin-Dyes and dyeing-Rayon)

PONOMAREV, V.K.

Effect of tension on the stretching of yarn. Tekst.prom. 15 no.12:
46-47 D '55. (MLRA 9:3)

(Yarn--Testing)

PONOMAREV, V.M.

Subject : USSR/Aeronautics - aircraft stability AID P - 5223
Card 1/1 Pub. 135 - 9/26
Author : Ponomarev, V. M., Eng.-Maj., Candid. of tech. sci.
Title : ~~Stability and control of aircraft at supersonic speeds~~
Title : Stability and control of aircraft at supersonic speeds
Periodical : Vest. vozd. flota, 11, 44-50, N 1956
Abstract : The changes in longitudinal and lateral stability, which occur during the transition from the subsonic to the supersonic speed, are discussed by the author. One photo, 5 diagrams. The article merits attention.
Institution : None
Submitted : No date

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E023/E235

16.9500

AUTHOR: Ponomarev, V. M. (Leningrad)

TITLE: Energy Aspects of Control Processes in Automatic-Control
Systems

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye
tekhnicheskikh nauk, Energetika i avtomatika, 1959,
Nr 6, pp 134-140 (USSR)

ABSTRACT: The paper presents general integral relations for the
energy consumed or demanded in a control system, in
particular in one whose transient response is oscillatory.
The various figures illustrate how the energy demand
depends on a parameter α specifying the action of the
program control (essentially the reciprocal of the
time-scale of the program) or on ω , the frequency of
a perturbing force. It is shown that the relations
are of rather general type, and so may be applied to
many different control systems. There are 7 figures
and 1 Soviet reference. 4

SUBMITTED: September 16, 1959

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16.9500

S/024/60/000/005/013/017
E140/E435

AUTHOR: Ponomarev, V.M. (Leningrad

TITLE: On the Automatic Control Systems With Optimal Energy Consumption

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Energetika i avtomatika, 1960, No.5, pp.165-169

TEXT: The present note concerns the synthesis of control systems with minimal energy consumption during the transient process. It is assumed that the system is described by an n -th order linear differential equation with constant coefficients. The Laplace transform is employed. Continuous and discrete systems are examined and it is found that the latter are superior. In the discrete system it is necessary to have signal converters realizing certain transformations of the input signal to permit realization of the optimum in the present sense. Three system structures are considered: without extrapolator, with extrapolator, self-adjusting system. There are 4 figures and 3 Soviet references.

SUBMITTED: May 7, 1960
Card 1/1

PONOMAREV, V.M. (Leningrad)

Approximation method for studying automatic control systems
with variable parameters. Izv. AN SSSR. Otd. tekhn. nauk.
Energ. i avtom. no.5:77-81 S-O '62. (MIRA 15:11)
(Automatic control)

PONOMAREV, V.M. (Leningrad)

Synthesis of an optimal control system. Izv. AN SSSR. Tekh.
kib. no.5:141-148 S-O '63. (MIRA 16:12)